Jameco Part number 116505

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Facsimile Cover Sheet

From: S. YOSHINO	**Date:** 08-20-97
Company: MATSUSHITA COMMUNICATION INDUSTRIAL CO., LTD.	**Time:** 12:25 PM
Your Facsimile #: 045-939-1400	**Pages:** 1
To: JAMECO TECHNICAL SUPPORT	
Message:	
DEAR SIR,	
I WOULD LIKE TO REQUEST SPECIFICATIONS FOR A PANASONIC MICROPHONE w/ # 54G5.	
THANK YOU FOR YOUR REPLY.	
Please see attached 2 pages spec. 1/3	
If you have further question, please send.	
Best Regards	
S. Yoshino	
Name of Sender: JAIME MENDIOLA **Signature:**	

PRODUCT SPECIFICATIONS

Type: Electret Condenser Microphone

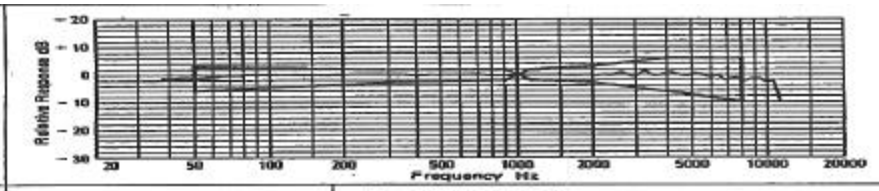
Number: WM-54BT

I. Electrical Characteristics

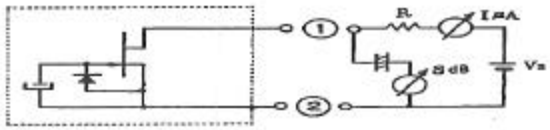
Test Condition (Vs=2.5V R=2.2kÙ Ta=20°C R.H.=65%)

Item	Symbol	Test Conditions	Minimum	Standard	Maximum	Unit
						dB
Sensitivity	S	= 1kHz, Pin = 1 Pa	-47	-44	-41	OdB=1V /Pa
Output Impedance	Zout	= 1kHz, Pin = 1 Pa			2.2	k Ù
Directivity						
Current Consumption	I				600	ì A
		= 1kHz, Pin = 1 Pa				
S/N Ratio	S/N (A)	A Curve	60			dB
		= 1kHz, Pin = 1 Pa				
Decreasing Voltage Characteristic	S	Vs = 2.5-2.0V			-3	dB

Frequency Response



Measurement Circuit



II. Mechanical Characteristics

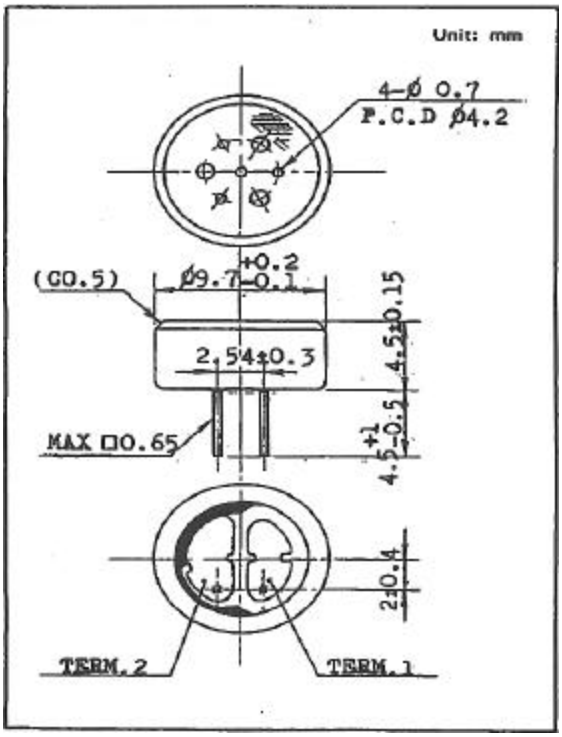
Dimension	ϕ9.7 x 4.5 (mm) (See appearance drawing.)
Weight	Less than 1.0
Soldering Heat Shock	To be no interference in operation after soldering heat shock, temperature 260°C ±5°C for 5 ±1 seconds.
Terminal Mechanical Strength	To be no interference in operation after pulled the terminal with 1 kg strength for 1 minute.

Absolute Maximum Ratings	**Operating voltage**	**Storage temperature range**	
	Vs (V)	Tstg (°C)	
	10	-20~+60	

III. Reliability Test

Vibration Test	To be no interference in operation after vibrations, 10Hz to 55Hz for 1 minute full amplitude 1.52mm, for 2 hours at three axises.
Drop Test	To be no interference in operation after dropped to concrete floor each one time from 1 meter height at three directions in state of packing.
Temperature Test	a) After exposure at 70℃ for 200 hours, sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at 20℃.) b) After exposure at -25℃ for 200 hours, sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at 20℃.)
Humidity Test	After exposure at 60℃ and 90 ~ 95% relative humidity for 200 hours, sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at 20℃.)
Temperature Cycle Test	After exposure at -25℃ for 30 minutes, at 20℃ for 10 minutes, at +70 ℃ for 30 minutes, at 20℃ for 10 minutes, 5 cycles, sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at 20℃.)

IV. Appearance Drawing



V. Other

We recommend hand soldering process for this micropohne.

However, if you use a automatic soldering machine for soldering of this microphone, please examine soldering temperature and time before applying automatic soldering process.

M18A0616A3A

Jameco Part number 116505

Omnidirectional Electret Condenser Microphone Cartridge

無指向性エレクトレットコンデンサマイクロホン

WM-54B (pin type)

- High-performance, cost-effective electret condenser microphone cartridge. Newly developed structure enables 4.5mm thin cartridge.
- This can be used for automatic soldering process to solder lead pins of microphone.
- WM-54B series are low-voltage 2.5V operation microphones and suitable for tape recorders, telephone devices and toys.

- 高性能、ローコストエレクトレットコンデンサマイクロホン。
- 新開発の構造を採用し、4.5mmの薄型を実現。
- マイクロホンリードピン自動半田付け工程に対応。
- 低電圧、2.5V駆動マイクロホン。テープレコーダ、電話機、玩具などに最適。

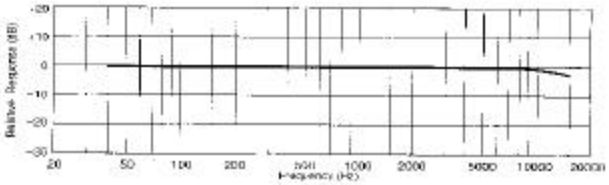
Vs = 2.5V, RL = 2.2k??

Appearance 外観

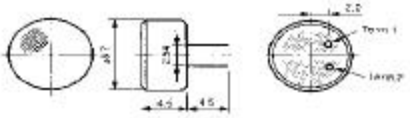
Sensitivity 感度

X	−46±3dB
T	−44±3dB
Y	−42±3dB
U	−40±3dB
M	−44±2dB
H	−42±2dB

Typical Frequency Response Curve 周波数特性



Dimensional Drawing 外観寸法図



Applications 用途

1. Telephone answering devices
2. Built-in microphones for tape recorders
3. Intercoms
4. Completed microphones for recording, testing, and monitoring
5. Sonic controlled toys and sensors
6. Others

1. 電話機
2. テープレコーダ内蔵マイクロホン
3. インターホン
4. 録音、試験、モニタリング用マイクロホン
5. 音声制御型玩具、センサー
6. その他

Specifications 仕様

Sensitivity:	See above (0dB = 1Pa, 1kHz)
Impedance:	Low impedance
Directivity:	Omnidirectional
Frequency:	20 - 16,000Hz
Max. operation voltage:	10V
Standard operation voltage:	2.5V
Current consumption:	Max. 0.6mA
Sensitivity reduction:	Within −3dB at 2V
S/N ratio:	More than 60dB

感度	上記参照、(0dB=1V/Pa, 1kHz)
インピーダンス	2.2kΩ以下
指向特性	無指向性
最大動作電圧	10V
標準動作電圧	2.5V
消費電流	最大0.6mA
減電圧感度	2Vにて−3dB以内
S / N 比	60dB以上

Schematic Diagram 測定回路図